



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,847	11/12/2003	Bradley Krantz	2267.685US02	6083

24113 7590 03/23/2006

PATTERSON, THUENTE, SKAAR & CHRISTENSEN, P.A.  
4800 IDS CENTER  
80 SOUTH 8TH STREET  
MINNEAPOLIS, MN 55402-2100

EXAMINER
----------

HUSON, MONICA ANNE

ART UNIT	PAPER NUMBER
----------	--------------

1732

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/706,847

**Applicant(s)**

KRANTZ ET AL.

**Examiner**

Monica A. Huson

**Art Unit**

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

This office action is in response to the Amendment filed 5 January 2006.

Due to applicant's amendment, the previous rejections are withdrawn.

### *Specification*

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not contain support for translating either the first or second mold cores in a direction generally normal to the first or second, respectively, direction of linear retraction.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Deutsch (U.S. Patent 3,752,436).

Regarding Claim 1, Deutsch shows that it is known to carry out a method of forming a sweep elbow fitting having a bend portion and two straight portions, a greater curvature and a lesser curvature (Figure 1), the method comprising the steps of inserting a first segmented mold

Art Unit: 1732

core, having a plurality of segments, including a first segment and a second segment, the mold core having a bend portion and a straight portion, into a mold cavity, the first segment being positioned along the greater curvature (Figure 1, element 46), and the second segment being positioned along the lesser curvature (Figure 1, element 14) and the first segment being slidably movable relative to the second segment (Figure 1); inserting a second similar segmented mold core, having a plurality of segments, including a third segment and a fourth segment, the mold core having a bend portion and a straight portion, into the mold cavity, the third mold segment being positioned along the greater curvature (Figure 1, element 62), and the fourth segment being positioned along the lesser curvature (Figure 1, element 38) and the third segment being slidably movable relative to the fourth segment (Figure 1); injecting a molten polymer into the mold cavity (Column 3, lines 54-56); allowing the molten polymer to, at least partially, set (Column 3, lines 59-60); linearly retracting the first segment of the mold core from the mold cavity in a first direction substantially parallel to the straight portion (Column 4, lines 3-25); translating the first mold core in a direction generally normal to the first direction of linear retraction (Column 3, lines 67-68; Column 4, lines 1-25); linearly retracting the second segment (Column 3, lines 61-63); linearly retracting the third segment of the mold core from the mold cavity in a second direction (Column 4, lines 14-25); translating the second mold core in a direction generally normal to the second direction of linear retraction (Column 3, lines 67-68; Column 4, lines 1-25); and linearly retracting the second segment (Column 3, lines 61-63).

Regarding Claim 2, Deutsch shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising the step of selecting the segmented mold core and similar mold core such that each have only two segments (Figure 1, elements 14, 46,

Art Unit: 1732

62, 38).

Regarding Claim 3, Deutsch shows the process as claimed as discussed in the rejection of Claim 1 above, including a method further comprising the step of selecting segments such that the first and second segments share opposed surfaces and the third and fourth segments share opposed surfaces and further comprise alignment guides on the opposed surfaces (Figure 1, element 14, 46, 62, 38; Alignment guides = meeting edges of cores 14, 46, 62, 38).

Regarding Claim 5, Deutsch shows that it is known to carry out a method of forming a sweep elbow fitting having a bend portion and two straight portions (Figure 1), the method comprising the steps of inserting a segmented mold core, having a first segment and a second segment, the mold core having a bend portion and a straight portion, into a mold cavity, the first segment and the second segment each comprising about half of a cylinder and the first segment further comprising a greater curvature of a bend and the second segment further comprising lesser curvature of the bend and the first segment and the second segment sharing an axially extended interface (Figure 1); injecting a molten polymer into the mold cavity (Column 3, lines 54-56); allowing the molten polymer to, at least partially, set (Column 3, lines 59-60); linearly retracting the first segment of the mold core from the mold cavity in a direction substantially parallel to the axially extending interface (Column 4, lines 3-25); translating the mold core in a direction generally normal to the direction of linear retraction (Column 3, lines 67-68; Column 4, lines 1-25); linearly retracting the second segment from the mold core (Column 3, lines 61-63).

Regarding Claim 7, Deutsch shows that it is known to have a mold core for forming a curved fluid passage in a fluid flow fitting (Figure 1), the mold core comprising two segments, each segment having a bend portion and a straight portion and the two segments forming

Art Unit: 1732

together a miter at the end thereof (Figure 1, elements 14, 46), the two segments being linearly retractable independently of each other and the mold core being movable translationally in a direction substantially normal to a direction of the linear retraction, and the mold core being capable of insertion into and retraction from a mold cavity (Column 3, lines 61-63, 67-68; Column 4, lines 1-25).

Regarding Claim 8, Deutsch shows the process as claimed as discussed in the rejection of Claim 7 above, including an apparatus comprising a first segment and a second segment, the first segment comprising an outside sweep core and the second segment comprising an inside sweep core (Figure 1, elements 14, 46).

Regarding Claim 9, Deutsch shows the process as claimed as discussed in the rejection of Claim 7 above, including an apparatus further comprising each segment thereof having at least one face in slidable opposition to at least one face of the at least one other segment, the faces having alignment guides (Figure 1, elements 14, 46; Alignment guides = meeting edges of cores 14, 46, 62, 38).

Claims 11, 12, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Christensen et al. (U.S. Patent 3,095,613).

Regarding Claim 11, Christensen shows that it is known to have a molded fluoropolymer sweep fluid flow fitting having straight, internally generally cylindrical, elongate ends and flat drafts defined in a wall surrounding a lumen thereof (Figures 1-4; Column 2, lines 67-72).

Regarding Claim 12, Christensen shows the process as claimed as discussed in the rejection of Claim 11 above, including a product in which the flat drafts comprise opposed

Art Unit: 1732

flattened portions on the interior walls of the fitting, the flattened portions having a greatest width located in the vicinity of a bend portion of the fitting and tapering away from the bend portion (Figure 4).

Regarding Claim 14, Christensen shows the process as claimed as discussed in the rejection of Claim 11 above, including a product in which the fitting is a sweep T (Column 2, lines 67-72).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4, 6, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deutsch, in view of Corbett, Jr. (U.S. Patent 6,328,309).

Regarding Claim 4, Deutsch shows the process as claimed as discussed in the rejection of Claim 1 above, but he does not teach a specific polymer. Corbett, Jr. shows that it is known to carry out a method of forming a pipe fitting further comprising the step of injecting perfluoroalkoxy as the molten polymer (Column 3, lines 54-65). Corbett, Jr. and Deutsch are combinable because they are concerned with a similar technical field, namely, that of molding processes which produce pipes. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Corbett, Jr.'s material in Deutsch's molding process to obtain a pipe with the desired physical characteristics of polyfluoroalkoxy.

Regarding Claim 6, Deutsch shows the apparatus as claimed as discussed in the rejection of Claim 5 above, but he does not teach a specific polymer. Corbett, Jr. shows that it is known to carry out a method of forming a pipe fitting further comprising the step of injecting perfluoroalkoxy as the molten polymer (Column 3, lines 54-65). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Corbett, Jr.'s material in Deutsch's molding apparatus to obtain a pipe with the desired physical characteristics of polyfluoroalkoxy.

Regarding Claim 13, Deutsch shows the product as claimed as discussed in the rejection of Claim 11 above, but he does not teach a specific polymer. Corbett, Jr. shows that it is known to carry out a method of forming a pipe fitting further comprising the step of injecting perfluoroalkoxy as the molten polymer (Column 3, lines 54-65). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Corbett, Jr.'s material in Deutsch's molded product to obtain a pipe with the desired physical characteristics of polyfluoroalkoxy.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Deutsch, in view of Shale (U.S. Patent 3,545,718). Deutsch shows the apparatus as claimed as discussed in the rejection of Claim 9 above, but he does not show an interlocking groove. Shale shows that it is known to have an apparatus comprising alignment guides which comprise a boss on a first face and an interlocking groove on a second face (Figure 1; Figure 3; Column 1, lines 39-72; Column 2, lines 1-40). Shale and Deutsch are combinable because they are concerned with a similar technical field, namely, that of molding operations which form rounded pipes. It would have



Art Unit: 1732

been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Shale's alignment guides in Deutsch's apparatus in order to insure that there was no movement between the two segments.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Monica A Huson  
March 20, 2006



**MICHAEL P. COLAIANNI**  
**SUPERVISORY PATENT EXAMINER**